

A Method, a Sender, a Receiver, an Optical Network Element and a Serialized Packet Format for Transmitting Packets

Claims

What is claimed is

1. A method for transmitting packets comprising a synchronization part and a payload part, the payload part comprising a first data sequence and a second data sequence, said method comprising the steps of

- sending and encoding the first data sequence using a first encoding scheme;
- sending a synchronization part using the first encoding scheme;
- encoding and sending the payload part using a second encoding scheme

on the sender side and

- receiving and decoding the first data sequence,
- detecting the synchronization part and synchronizing and adapting the receiver and decoder,
- receiving and decoding the second data sequence

on the receiver side,

wherein the method comprises the further steps of:

- sending a shortened synchronization part using the first encoding scheme, followed by
- sending the first data sequence using the first encoding scheme, followed by

- sending the second data sequence using the second encoding scheme instead

on the sender side and

- detecting the shortened synchronization part,
 - receiving and decoding the first data sequence,
 - detecting the end of the first data sequence and synchronizing and adapting the receiver and decoder,
 - receiving and decoding the second data sequence
- on the receiver side, wherein

the first encoding scheme is a line coding enabling the synchronization in the receiver.

2. The method according to claim 1, wherein the first data sequence is Manchester encoded and wherein the second data sequence is non-return-to-zero encoded.
3. The method according to claim 1, wherein said adaptation and said decoding is dependent on the received signal pattern.
4. The method according to claim 1, wherein said adaptation and said decoding is time dependent.
5. The method according to claim 1, wherein said second encoding comprises further encodings.
6. A sender for transmitting packets comprising a synchronization part and a payload part, said sender comprising a serialization unit for serialization data and an encoding unit for encoding said serialized data, wherein said serialization unit is adapted to generate a synchronization part using a first encoding scheme, followed by a first data sequence of the payload part using the first encoding scheme, followed by a second data sequence using the second encoding

scheme, wherein the first encoding scheme is a line coding enabling a synchronization in a receiver.

7. A receiver for receiving packets comprising a synchronization part and a payload part, said receiver comprising a detector unit for detecting a synchronization part encoded in a first encoding scheme, and a control unit for adapting the receiver characteristics, wherein the receiver comprises a decoder adapted to decode a first data sequence of the payload part, encoded in the first encoding scheme, said detector unit is adapted to detect the end of said first data sequence, said control unit is adapted to adapt the decoder, and said decoder for decoding a second data sequence of the payload part, encoded in a second encoding scheme, and wherein the first encoding scheme is a line coding enabling a synchronization in the receiver.
8. An optical networking element for transmitting packets comprising a synchronization part and a payload part, said optical networking element comprising a sender according to claim 6.
9. An optical networking element for transmitting packets comprising a synchronization part and a payload part, said optical networking element comprising a receiver according to claim 7.